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Do not fear the open abdomen

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When Ogilvie described abdominal wound closures with petroleum jelly gauze and retention sutures, he understood the complications associated with open peritoneal cavities after wartime injuries.[1] Steinberg's modification, steel wires to maintain tension and protecting the bowel with laparotomy pads, was also successful.[2] These techniques were built on a primary principle: reapproximate the abdominal wall fascia and protect the underlying bowel. As our knowledge regarding surgical critical care increased, the iatrogenic barriers such as bowel edema and metabolic derangements, were virtually eliminated. In the modern era, trauma and acute care surgeons have accelerated abdominal wall closures and increased patient survival by using damage control surgical techniques.[3] In the same vein, The American Association for the Surgery of Trauma Open Abdomen Study group demonstrated minimizing the time elapsed from the initial procedure to abdominal wall closure mitigated complications.[4]

Rezende-Neto's group present another intervention for our toolbox.[5] Employing tangentially directed tension in a regulated and reproducible manner decreased fascial gap distances and increased early closure rates. Similar to any new device, there is a potential it could be used in excess. An open abdomen should not be feared, but respected. It is an acceptable temporary solution while ongoing metabolic derangements or other interventions are addressed. The initial traumatic insult and absence of physiologic exhaustion will determine when the definitive closure is performed. The closure's timing will ultimately be dictated by the patient's response to our interventions and not solely by the presence of the abdominal cavity. Historically, previous closures were based on a surgeon's tactile sensation and professional experience; however this abstract method led trainees to develop and apply their own techniques. Rezende-Neto's current findings may represent a paradigm shift in patient care that eliminates the subjective nature of previous closures and ultimately benefits our patients in a standardized manner.

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